

Witsies engineer prototype for prestigious Le Mans 2012 motor race



In 2009, Bailey Edwards Cars – which manufactures recreational racing car replicas – enlisted a team of Wits mechanical engineers to contribute to a prototype replica that would enable South Africa to compete for the first time in the world's oldest sports car endurance race – the prestigious 24 Hours of Le Mans 2012, in France.

The Bailey Le Mans Prototype II (LMP2) debuted at the *Top Gear* Festival in Kyalami in May 2011 and featured the first composite chassis tub designed and built in South Africa.

Cars undergo stringent structural tests to qualify to compete at Le Mans. Bailey's Chief Designer, Greg Bailey, entrusted specific aspects of the analysis of the LMP2 to postgraduate students in the School of Mechanical, Industrial and Aeronautical Engineering, under the supervision of the School's John Shires (BSc Eng Mech 1982) and external examiner, David Gentles (BSc Eng Mech 2001).

Tom Stevenson (BSc Eng Mech 2009) analysed the car's aerodynamics, and the LMP2 is the focus of his Masters. Rob Berman (BSc Eng Mech 2010) and Sashen Naidoo (BSc Eng Mech 2008) are analysing the car's suspension dynamics. Bruno Correia (BSc Eng Mech 2010) devised a way of testing the structure and Chris de Saxe analysed the stress of the composite tub. Dr Frank Kienhofer (BSc Eng Mech 1996, MSc Eng Mech 2002) is supervising the dynamic analysis Masters theses.

Wits has produced eminent engineering talent, which the motor industry has snapped up:

- **Anthony Abbot** (BSc Eng Mech 1988, PhD Mech & Ind 1996) is the principal software architect at **Red Bull Technology (Formula 1)**
- **Rory Byrne** (BSc 1964, honorary DSc 2005) is **Ferrari's** chief designer and designed the Ferrari 2002 in which Michael Schumacher races
- **Jonty Culwick** (BSc Eng Mech 2008) designs rally cars for **Prodrive**
- **David Gentles** designed parts of the **Airbus A380** and leads the chassis design of South



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Africa's first production electric car, 'the Joule'

- **Giles Wood** (BSc Eng Mech 1991) is chief engineer simulation/analysis at **Red Bull Racing**.
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